

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Chen et al.

Art Unit : 1632

Serial No.: 10/619,824

Examiner: Unknown

Filed

: July 14, 2003

Title

: TREATMENT AND PROPHYLAXIS WITH 4-1BB-BINDING AGENTS

Mail Stop Amendment Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

TRANSMITTAL

The following correspondence relating to this application is enclosed for filing:

- 1. Information Disclosure Statement (1 page);
- 2. Form PTO-1449 (3 pages);
- 3. Copies of Cited References (49 references); and
- 4. A Return Postcard.

Please date stamp and return the enclosed postcard. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: September 15, 2004

Elizabeth N. Kaytor, Ph.D.

Reg. No. 53,103

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Lisa M. Becker
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INFORMATION DISCLOSURE STATEMENT

Applicant submits the references listed on the attached form PTO-1449.

This statement is being filed before the receipt of a first Office action on the merits. Since this application was filed after July 1, 2003, only copies of non-U.S. patent citations are being provided. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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Substitute Form PTO-1449	U.S. Department of Commerce Patent and Trademark Office	Attomey's Docket No. 07039-427001	Application No. 10/619,824	
Information Disclosure Statement 17 by Applicant (Use several sheets if necessary)		Applicant Chen et al.		
(Use several st	neets if necessary)	Filing Date July 14, 2003	Group Art Unit 1632	

	U.S. Patent Documents						
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	4,946,778	08/07/90	Ladner et al.			
	AB	5,674,704	10/07/97	Goodwin et al.			
	AC	5,874,240	02/23/99	Ni et al.			
	AD	5,928,893	07/27/99	Kang et al.			
	AE	6,210,669	04/03/01	Aruffo et al.			
	AF	6,303,121	10/16/01	Kwon			
	AG	6,355,779	03/12/02	Goodwin et al.			
	AH	6,458,934	10/01/02	Hong et al.			
	AI	2002/0168719	11/14/02	Kwon			

	Foreign Patent Documents or Published Foreign Patent Applications							
Examiner	Desig.	Document	Publication	Country or				lation
Initial	ID	Number	Date	Patent Office	Class	Subclass	Yes	No
	AJ	WO 96/29348	09/26/96	PCT				
	AK	WO 98/16249	04/23/98	PCT				
	AL	WO 00/29445	05/25/00	PCT				
	AM	WO 00/41508	07/20/00	PCT				
	AN	WO 01/62905	08/30/01	PCT				

	Other Documents (include Author, Title, Date, and Place of Publication)				
Examiner	Desig.				
Initial	ID	Document			
	AO	BD Pharmingen TM Technical Data Sheet, "Purified Rat Anti-Mouse Ly-6G (Gr-1) Monoclonal Antibody for Immunohistochemistry (IHC) page 1 of 3			
	AP	Adachi et al., "Aberrant transcription caused by the insertion of an early transposable element in an intron of the Fas antigen gene of <i>lpr</i> mice," <u>Proc. Natl. Acad. Sci. USA</u> , 1993, 90:1756-1760			
	AQ	Alderson et al., "Molecular and biological characterization of human 4-1BB and its ligand," <u>Eur. J. Immunol.</u> , 1994, 24:2219-2227			
	AR	Cohen and Eisenberg, "Lpr and gld: Single Gene Models of Systemic Autoimmunity and Lymphoproliferative Disease," Annu. Rev. Immunol., 1991, 9:243-269			
	AS	Cole et al., "The EBV-Hybridoma Technique and its Application to Human Lung Cancer," Monoclonal Antibodies and Cancer Therapy, 1985, Alan R. Liss, Inc. pp. 77-96			
	AT	Cote et al., "Generation of human monoclonal antibodies reactive with cellular antigens," <u>Proc. Natl. Acad. Sci. USA</u> , 1983, 80:2026-2030			

Examiner Signature	Date Considered		
•			
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 07039-427001	Application No. 10/619,824
Information Disci		Applicant Chen et al.	
(Use several sheets if necessary) (37 CFR §1.98(b))		Filing Date July 14, 2003	Group Art Unit 1632

	Other D	ocuments (include Author, Title, Date, and Place of Publication)
Examiner Initial	Desig. ID	Document
	AU	Ding et al., "Release of Reactive Nitrogen Intermediates and Reactive Oxygen Intermediates from Mouse Peritoneal Macrophages," J. Immunol., 1988, 141:2407-2412
	AV	Finck et al., "Treatment of Murine Lupus with CTLA4lg," Science, 1994, 265:1225-1227
	AW	Fleming et al., "Selective Expression of Ly-6G on Myeloid Lineage Cells in Mouse Bone Marrow," J. Immunol., 1993, 151:2399-2408
	AX	Foell et al., "CD137 costimulatory T cell receptor engagement reverses acute disease in lupus-prone NZB x NZW F ₁ mice," J. Clin. Invest., 2003, 10:1505-1518
	AY	Goodwin et al., "Molecular cloning of a ligand for the inducible T cell gene 4-1BB: a member of an emerging family of cytokines with homology to tumor necrosis factor," <u>Eur. J. Immunol.</u> , 1993, 23:2631-2641
	AZ	Haendeler et al., "Nitric Oxide and Apoptosis," Vitam. Horm., 1999, 57:49-77
	AAA	Hestdal et al., "Characterization and Regulation of RB6-8C5 Antigen Expression on Murine Bone Marrow Cells," J. Immunol., 1991, 147:22-28
	ABB	Hoffman, "T Cells in the Pathogenesis of Systemic Lupus Erythematosus," Front. Biosci., 2001, 6:D1369-1378
	ACC	Hunter, "Diabetes in pregnancy," <u>Effective Care in Pregnancy and Childbirth</u> , Vol. 1, 1989, Chalmers et al. (eds.), Oxford University Press, pp. 578-593
-	ADD	Huse et al., "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda," Science, 1989, 246:1275-1281
	AEE	Jacobson et al., "Unique site of IgG2a and rheumatoid factor production in MRL/lpr mice," Immunol. Rev., 1997, 156:103-110
	AFF	Kaliyaperumal et al., "Antigen-Specific Therapy of Murine Lupus Nephritis Using Nucleosomal Peptides: Tolerance Spreading Impairs Pathogenic Function of Autoimmune T and B Cells," <u>J. Immunol.</u> , 1999, 162:5775-5783
	AGG	Kalled et al., "Anti-CD40 Ligand Antibody Treatment of SNF ₁ Mice with Established Nephritis: Preservation of Kidney Function," J. Immunol., 1998, 160:2158-2165
	АНН	Kelley and Wüthrich, "Cytokines in the Pathogenesis of Systemic Lupus Erythematosus," Semin. Nephrol., 1999, 19:57-66
	AII	Köhler et al., "Continuous cultures of fused cells secreting antibody of predefined specificity," Nature, 1975, 256:495-497
	AJJ	Kozbor and Roder, "The production of monoclonal antibodies from human lymphocytes," Immunology Today, 1983, 4:72-79
	AKK	Kwon et al., "4-1BB: Still in the Midst of Darkness," Mol. Cells, 2000, 10:119-126
	ALL	Lawson et al., "Treatment of murine lupus with cDNA encoding IFN-γR/Fc," J. Clin. Invest., 2000, 106:207-215
	AMM	Lenardo et al., "MATURE T LYMPHOCYTE APOPTOSIS—Immune Regulation in a Dynamic and Unpredictable Antigenic Environment," Annu. Rev. Immunol., 1999, 17:221-253
	ANN	Liang et al., "Autoantibody Responses and Pathology Regulated by B7-1 and B7-2 Costimulation in MRL/lpr Lupus," J. Immunol., 2000, 165:3436-3443
	AOO	Melero et al., "Amplification of tumor immunity by gene transfer of the co-stimulatory 4-1BB ligand: synergy with the CD28 co-stimulatory pathway," <u>Eur. J. Immunol.</u> , 1998, 28:1116-1121

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	Other D	ocuments (include Author, Title, Date, and Place of Publication)
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	APP	Melero et al., "Monoclonal antibodies against the 4-1BB T-cell activation molecule eradicate established tumors," Nature Medicine, 1997, 3:682-685
	AQQ	Melero et al., "NK1.1 Cells Express 4-1BB (CDw137) Costimulatory Molecule and Are Required for Tumor Immunity Elicited by Anti-4-1BB Monoclonal Antibodies," Cellular Immunology, 1998, 190:167-172
	ARR	Mohan et al., "Interaction Between CD40 and Its Ligand gp39 in the Development of Murine Lupus Nephritis," J. Immunol., 1995, 154:1470-1480
	ASS	Morse et al., "Abnormalities Induced by the Mutant Gene <i>lpr</i> : Expansion of a Unique Lymphocyte Subset," J. Immunol., 1982, 129:2612-2615
<u></u>	ATT	Pollok et al., "4-1BB T-cell antigen binds to mature B cells and macrophages, and costimulates anti μ-primed splenic B cells," <u>Eur. J. Immunol.</u> , 1994, 24:367-374
	AUU	Pollok et al., "Inducible T Cell Antigen 4-1BB," J. Immunol., 1993, 150:771-781
	AVV	Salih et al., "4-1BB ligand – just another costimulating molecule?" <u>International Journal of Clinical Pharmacology and Therapeutics</u> , 2002, 40:348-353
	AWW	Sneller et al., "A Novel Lymphoproliferative/Autoimmune Syndrome Resembling Murine <i>lpr/gld</i> Disease," J. Clin. Invest., 1992, 90:334-341
	AXX	Suda and Nagata, "Why do defects in the Fas-Fas ligand system cause autoimmunity?" J. Allergy Clin. Immunol., 1997, 100:S97-101
	AYY	Sun et al., "Signaling of 4-1BB Leads to Amelioration of Experimental Autoimmune Encephalomyelitis," FASEB J., 2001, Vol. 5, page A1210
	AZZ	Theofilopoulos and Lawson, "Tumour necrosis factor and other cytokines in murine lupus," Ann. Rheum. Dis., 1999, 58 Suppl. 1:I49-55
	AAAA	Theofilopoulos and Dixon, "Etiopathogenesis of Murine SLE," Immunol. Rev., 1981, 55:179-216
	ABBB	Vinay et al., "Role of 4-1BB in immune responses," Semin. Immunol., 1998, 10(6):481-489
	ACCC	Wilcox et al., "Provision of antigen and CD137 signaling breaks immunological ignorance, promoting regression of poorly immunogenic tumors," J. Clin. Invest., 2002, 109:651-659
·	ADDD	Williams et al., "Nitric Oxide Synthase Plays a Signaling Role in TCR-Triggered Apoptotic Death, <u>J. Immunol.</u> , 1998, 161:6526-6531
	AEEE	Wofsy, "Treatment of Murine Lupus with Anti-CD4 Monoclonal Antibodies," <u>Immunol. Ser.</u> , 1993 59:221-236
	AFFF	Wofsy et al., "The Proliferating Cells in Autoimmune MRL/lpr Mice Lack L3T4, an Antigen on "Helper" T Cells that Is Involved in the Response to Class II Major Histocompatibility Antigens," J Immunol., 1984, 132:2686-2689

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